



Cent Wells &c

July 31, 25.
29.

1907/25

Tar Springs 3rd Chester co.

Asphalt quarry near Garfield

Henry J. Green

1191 Bedford Ave.

Brooklyn, Mass.

Wm F. Prouty,

Univ. of Alabama,

University,

Ala.

Stevens, Ned. Market, near
Fourth.

Garfield & Noble Graves.

Geo. McCubbin, at Stephensport;

Wants an elementary book on
Geology.

Edw. Montague 1 mile N. of Chertville.

Sil + D or. of East Centrally

~~Prof C T Jackson Harvard Univ~~
~~Prof Stuart Weller Chicago~~
~~Prof. Wm F Prouty University of Ala~~
~~Prof. Chas Schuchert Yale~~
~~Mr. E O Ulrich Washington~~

Preliminary Notes in Cincinnati
Fossils.

~~Prof C. T. Jackson. Harvard Univ~~
~~Prof Stuart Weller~~
~~Prof. Charles Schuchert~~
~~Dr. E O Ulrich~~
~~Prof Ray S Burrler~~
~~Mr. John M. Nickles~~
~~Prof. W. S. Blatchley~~
~~Prof John M Clarke~~
~~Prof C R Primmer~~

Rhynd. laevis. 2 pellets seen in
the flat shell.

Cyathoxenia ^{St James} *parva*
Cyathoxenia (*parva*) *parva*
Zaphrentis *aperta* = *simulans*

Bothriophyllum *greeni* ^{St James}

Bothriophyllum at St James' Farm,
all the same as *greeni*

Bothriophyllum *aperta* 2 this
at St James' Farm
Bothriophyllum *aperta* 2 this

Bothriophyllum *aperta* 2 this
at St James' Farm

Cyathoxenia *bradleyi* = *parva*
spines. *Goniella*

Cyathoxenia *parva*

This is *parva*
reptile.

28 primary. also

Goniella 28 secondary
like mine!

Bothriophyllum *greeni*

Common broken
from *Bothriophyllum*
St James' Farm

Cyathoxenia *bradleyi*
St James

Zaphrentis *aperta*.
my large one. from
St James' Farm.

Agassiz agassizans flat in situ.

around the top. We on the top is

except the Unit. I say so, especially,
1. I am not a Unitarian.

Handwritten text: *Handwritten text, possibly a signature or name, partially obscured by a horizontal line.*

(5 ft 6 in. shaly brown ss.

15 13 in covered.

Top of hill north of Sample 12
 at once
 at road is a good road

Pyrite - not abundant

Names of beds not worked out

Top of hill north of Sample 12
 at once
 at road is a good road

- 27 ft shaly brown sandstone,
- 27 ft limestone. (Bed E)
- 14 ft covered. Probably limestone.
- 55 ft soft bluish clay shale,
- except at top (Bed D)
- 4 ft massive blue ls. fossils, few
- clayey near the top.
- 25 ft shaly thin bedded ss. blue, more
- bluish. No fossils,
- purple toward top, more greenish.
- 25 ft soft clay shales, reddish
- Agassiz crinoids flat in situ.
- near the top. Near the top is
- except thin layers, especially
- thin, crinoidal fossils few
- 33 ft fairly massive limestone. (Bed C)
- near the middle.
- merging into a sort of limestone
- 7 ft 3 in. bluish sandy shale, blue
- 5 ft 6 in shaly brown ss.
- 3 ft 3 in crinoidal limestone. B
- 15 ft in covered.
- R.R. level at Sample.
- road. A

1642 ft

16 ft.

30 ft covered. Supposed to be ss.

3 ft Sandstone

2 ft 6 in whitish clayey section

effluvia R. m. m. m.

at level

(15 ft) clay shale with

(15 ft) of fossils or fossils in the same

(15 ft) limestone or more like it

7 ft rather thin bedded ss, Barfield?

7 ft limestone (Holladay?)

755

Harris Quarry

16 ft massive l. fragments horizontal.

5 1/2 ft limestone (Holly) near base as

11 ft ss. fragment.

5 1/2 ft. l.

11 ft top of quarry exposure, whitish l.

1 1/2 ft weathering shaly

2 1/2 ft lighter colored l. in several layers
fine grained l.

3 ft chert common in upper part, grey

1 1/2 ft weathering shaly.

all around the quarry.

conspicuous division line

11 1/2 ft grey fine grained l. top on
south end of quarry.

8 1/2 ft grey fine grained l. flat ledge

1 1/2 ft soft limestone.

suggesting unconformity.

but near this & the underlying rock

1 ft whitish limestone, with clayey bottom

6 1/2 ft darker fine grained l.

6 1/2 ft whitish strongly oolitic l.

3 1/2 ft darker rock, oolitic in part, with
chert.

base of Harris

Seigillaria occurs in the massive
ss. fragments at the top of the
quarry. Is this Big Clifty or
Garfield? Since these fragments
may have become intermingled,
this is uncertain.

Lower half of Alcona is a greyish
limestone. Upper half of Fredonia
is a darker limestone interbedded
with whitish oolitic rock.

South of the Main quarry 100 yds
there is a small quarry with about
15 ft of white oolitic massive l.
below the base of the main
quarry.

Wednesday July 19.

Inc 10 - 54 at bridge at 3.55 PM,

Tuesday July 20.

Loc 13 — 700 ft. Eustace 7.00 A.M.

14 — North dip of rocks.

15 — 555 — top of Olney?

16 — 485 cross — 8.15 A.M.

17 — 550. N. dip. E. side. at 8.30 A.M.
so. base same.

18 — 500 — 620 at 8.50 A.M.

19 — 600 — 620 at 9.05 A.M.

20 — at 575 there is limestone. On the
dip to the N. it is not so.

21 — at 650 there is limestone at 9.30 A.M.
(Then 500. also at 600. This is the
top of the whole formation.)

21. — at 620 there is more. This is
the top of the area.

22 — 665 ft — at 9.45 A.M.

23 — 715 ft at 10.00 A.M.

24 — 630 ft at 10.40 A.M.

25 — 540 ft at 2.30 P.M. — top of Olney.

5 — Section opposite Windsor 2 pgs

dropped a little

Large ss. boulders, possibly

66 ft — top of ss. down to lowest

20 ft mud. fossils in lower 4 ft. Bed A.

34 ft fine grained l. fossils few Bed B.

20 ft mud full of fossils. Bed C.

2 feet with large fossils in it

34 ft to top of white l. limestone, white

15 ft poorly exposed

1 ft of limestone. interbedded

1 ft 8 in. surface weathering siliceous argill.

1 ft sand l.

2 ft argill. somewhat

5 ft rather soft argill. shales

2 ft hard argill. l.

- 24 - 660 - at 2.45 PM.
along a dip from here to 22
- 26 - 525 so, low int. seen. 1400
Dip 2.50 PM
North of 26 there is an old
creek bed.
- 23 - 705 later - at 3.20 PM.
- 22 - 705 later - at 3.30 PM.
- 7 - 735 - Holly l. at 3.40 PM.
strong NE dip.
Further on the NE dip is not
seen.
- 28 - 725 - Holly l. at 4.15 PM
- 29 - 735 at 4.30 PM.
- 30 - 665 top of Olean at 5.15 PM.
North of 30 there is a strong
S dip.
- 31 - Holly l. at 7.30 at 5.30 PM.
- 32 - 750 top of Holly l. at 5.45 PM.
There was an. below
SS dips SE.

650 - Big Spring at 7.40

Turn at left beyond barn
2 1/2 miles

Come into public road

turn left 200 yds, come to gate
on right.

take road thru farm, 1200.

public road in deep hollow

turn right down to Big Spring

Wednesday July 21

- 22 — 655 ft. Osgood Spring at 12.30 AM.
33 — 775 at 7.00 AM top of shale
at 700 - white & red sandstone
34 — 650 ft. Osgood Spring section
35 — 735 at 8.15 AM
top of shale
at top of red of sandstone
north to house of Mr. Howell
645 elevation of entrance to road
to Mr. Miller's house.
36 — 85 later at 9.30 AM.
36 — 685 top of exposed l. Probably
top of the top of the shale
at 9.45 AM
at 600 - Ordovician section with
37 — 635 - top of exposed l. Probably
top of shale at 10.20 AM
38 — 620 top of exposed l. Probably
top of shale at 10.45 AM
39 — 545 at 11.00 AM, Peretta.
41 — 620 top of l. - probably top of shale
at 11.15 AM

- 41 — 650 - top of (leaves exposed)
covered by 10 ft of sandy
material - sandstone near
base & sandy shale toward
top.
Probably this is lowest one
= Holly?
42 — 630 - top of l. Probably top of
leaves, at 11.45 AM.
West of here the rock dips east
ward.
43 — 760 - Holly l. Clay shale near top,
and rock resembling Crinoid
under it.
where some small l. Crinoid
turn off south, at 12.00 noon,
44 — 770 ft at 1.30 PM.
45 — 825 ft at 1.45 PM.
46 — 820 ft at 2.00 PM,
47 — 811 ft - Holly l. at 2.45 PM.
upper Holly appears to be 12 ft thick
underlain by 28 ft of thin bedded
material - mainly massive fine grained
at 811 ft there is a thin bed of
exposed.
Below this is plenty of sandstone
at 745 is top of leaves.
48 — 605 - at 3.15 PM.
49 — 615 - at 3.30 PM.
50 - Synchysia 34 ft from 650 at 3.35 PM
51 — distance from 670 at 4.20 PM.
distance unknown.

52. — 740 limestone at top of ridge.
There may have been much
more. at 4.40 PM.

53 770 limestone at top of ridge.
There may be more above that level.

710 at Dwingy 6.00 PM.

Barometer at Dwingy

Monday 588 — 7.30

580 9.30

520 11.30

580 1.30

570 3.40

Tuesday 490 — 7.30

490 10.45

490 11.45

500 12.35

540 3.20

Wednesday 820 — 7.30 AM

980 — 7.01 PM.

875 air deposit

993 - lower level at Petersburg
at 11.40 AM.

1060 top of l. exposed at 3.45 PM.

1140 - top of kn. l. suggests
80 ft of sandstone.

1052 - level of lower exposure at 3.45
to me, although listed by others
of 20 at base actually seen

20 ft to highest l. seen near river,
which is higher in fossils.

limestone 50 ft to upper half
upper half with thin sandy

20 ft of sandstone near, colored

52 ft of massive l. Olona, with
with the basal part 3 ft thick
sandy + cross-bedded.

I place the Big Cherty above

this upper limestone as

in the lower part of the

time. Of the Big Cherty as there

is there I make a note

Found Big Cherty in Big Cherty

20. 1071 at top of ridge at 5.30 PM.

1100 at top of ridge. 7.00 PM.

John & Mark Bennett

Went on to Chapman at 11

about 200 yds to left on
Chapman, on W of creek road,

Friday July 23.

755 at crest on at 6:30 AM

53 - 1000 ft. 945 at 7:10 AM

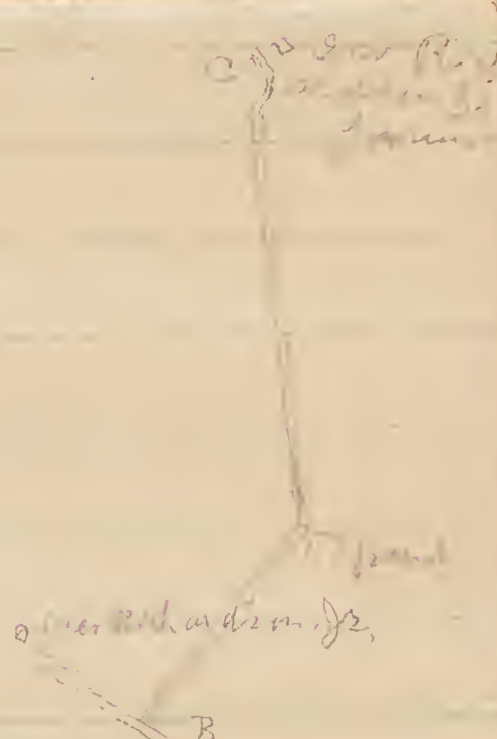
about 1/2 mile to left of
dike on road from 1000 ft.
into town on road to left of
large frame house - left of dike

54 - 900 at 7:20 AM

57 - Fredonia - 945 at 8:15 AM

945 - at 8:15 AM

58 - 1010 highest pt. along road. 8:20 AM



59 - 1000 ft. road with fossils collected
at base, over a E. dipping fault.

60 - Sandstone base - 945 at 3 PM,
13 ft. limestone.

60 - 6 ft. sandstone - 2 ft. along shale
4 ft. yellowish, etc. etc.
10 ft. mostly fine grained, thin bedded, Bed C
5 ft. sand & l. fossils - Bed B,
12 ft. limestone. Pentamerites. Bed A
Sandstone, top is massive, rest thin bedded
19 ft. sandstone, partially almost all ss, with
and in inclined cross layers in
ripple marks, etc. on top surface
interbedded ss. cross bedded with

top of sandstone ss. 910 ft at 2:10
strong dip toward west.

61 - 1012 ft at 3.30 PM. Pagnonville.

for Clark at Pagnonville
interested in the same.

Went to one place of the kind named at
Pagnonville.

62 - 972 ft 4.00 PM.

63 - 1032 ft 4.15 PM.

64 - 910 top of l. at 4.45 PM.

overlain by clay marl.

underlain by sandy
rock, thin bedded.

Further east than 2, 4 ft thick
is overlain by fossiliferous marl
like that at Pagnonville just
above the Lyons. Above this is
30 ft further up the hill is
the upper Lyons limestone.
Mrs. Collie Brown, about
1/2 mile from the Liberty house.
G. M. Brown.

855 top of Lyons? at 5.30 PM.

856 top of l.

900 top of Clark's l.

905 top of basal Clinton l.

65 - 1010 at 6.15 PM.

66 - 950 at 7 PM. Mack Bennett.

Saturday, July 11

67. Just off the Cave spring
cabin, about 2 mi S.W. from
Robert Green, who lives 1/4
mi W of Mack Bennett.
Chalky marl, with the same as
above.

680 - top of Lyons at 7.30 AM.

Reddy l. 20. Contact not seen.

16 ft Lyons upper l.

11 ft fossiliferous marl

14 ft limestone above above

8" bed coal. & part of

15" part of l. and s.s. above.

560 is elevation of top of l.

2 mi W of the Orchard. The l. is 24 ft.

68. 3/4 mi S.W. of Cave Spring, just E
of John L. Hall's land. 2 mi
W of Cave Spring at 10 AM.
630 ft - top of l.

Green Berry Thompson
660 ft top of l. at 10.05 AM.

16 ft marl. l. ^{original?} thin top layers? ^{inter-}
7 ft not exposed.
2 ft coarse granular l.
2 1/2 ft arg. l. with O. gr. d. m.
3 ft more sandy, same texture.
16 ft l. above fossils thick sandy, blue
discolored brown.

Fredrick's white 5 ft down.

1 ft l. R

4 1/2 ft l. rubble & sandy. Tubular?

2 ft l.

1/2 ft l. rubble

2 1/2 ft l. m. l.

Ind. distance. SE of 70. 1. 2. 3. 4. 5.
ss. l. m. l.

5 ft limestone

28 ft chiefly covered by debris
of limestone rubble same l.
R of preceding section.

770 ft at Black Bennett's store
at 12.25

Bennett's store CO.

730 ft. New Bennett's store, formerly
Gibson's store. West of
Hwy. 100 at 1 PM.

71 - 635 At wellhead near
Hwy. 100 at 1.50 PM.

72, - St. Louis fossils on west
side of hill. Top of Don Harris
house & road, directly west
of Mill Pore's cabin (starting)
about 3/4 way west of
Boulder bridge.

Thursday July 22

7.20 — 790

9.20 — 800

11.20 — 840

1.20 — 880

3.20 — 920

Friday July 23

6.20 — 900

8.25 — 880

10.20 — 860

12.20 — 860

2.20 — 860

4.20 — 860

26 g.

Saturday July 24

6.30 — 700

8.30 — 660

10.30 — 660

12.30 — 640

2.20 — 660

4.20 — 680

6.20 — 660

Sunday July 25. Wilmington

2 shirts

1 drawers

2 handkerchiefs

1 stockings

Cheney part. Mrs. J. Gordon (Pate)
Stephens part. Blair.

2 mi. from town. 100 yds up river
from depot by shingle mill.
plugged up. vic + gear

Druck you back of town.

Martin's place, 4 miles back of
Lewisport. Middleman Martin.
Can stop at his house.
Living still at Lewisport.

Hawesville, 2 miles, two

Joe Cooper knows much about it.

Pumping Station at Beattie in use.
One was at Long Branch.

5711 Blackmore Wilmington

Wants Report on Gas to be
finished. Coal operations.

A. E. Crawford. knows just
of vicinity of Stephensport.

Index is the Well digging from Gas and
 W + at Stephensport for the south
 of creek.

of sample		fine gr. l. (Holly?)	depth
1	Chert formation sub carboniferous		22
2		limestone particles. Holly?	30
3	Big cliffs	ss + a few cl. particles	35
4	St Louis	l. with numerous crin. heads	48
5	Albana	coarsely cryst. crinoid l.	75
6		hyaline sandy particles + coal particles.	80
7		white fine gr. l. with coal particles.	85
8		Fine sandy particles imbedded (numerous) in l.	90
9	Fredonia	oolite grains rare.	200
10	Fredonia	oolite grains distinct.	230
11	Fredonia	oolite grains common.	240
12	Fredonia	oolite grains	260
13	Fredonia	oolite grains	280
14	Fredonia	oolite grains	300
15	Fredonia	oolite grains	320
16	Fredonia	oolite grains	340
17	Fredonia	oolite grains	360
18	Fredonia	oolite grains	380
19	Fredonia	oolite grains	400
20	Fredonia	oolite grains	420
21	Fredonia	oolite grains	440
22	Fredonia	oolite grains	460
23	Fredonia	oolite grains	480
24	Fredonia	oolite grains	500
25	Fredonia	oolite grains	520
26	Fredonia	oolite grains	540
27	Fredonia	oolite grains	560
28	Fredonia	oolite grains	580
29	Fredonia	oolite grains	600
30	Fredonia	oolite grains	620
31	Fredonia	oolite grains	640
32	Fredonia	oolite grains	660
33	Fredonia	oolite grains	680
34	Fredonia	oolite grains	700
35	Fredonia	oolite grains	720
36	Fredonia	oolite grains	740
37	Fredonia	oolite grains	760
38	Fredonia	oolite grains	780
39	Fredonia	oolite grains	800
40	Fredonia	oolite grains	820
41	Fredonia	oolite grains	840
42	Fredonia	oolite grains	860
43	Fredonia	oolite grains	880
44	Fredonia	oolite grains	900
45	Fredonia	oolite grains	920
46	Fredonia	oolite grains	940
47	Fredonia	oolite grains	960
48	Fredonia	oolite grains	980
49	Fredonia	oolite grains	1000
50	Fredonia	oolite grains	1020
51	Fredonia	oolite grains	1040
52	Fredonia	oolite grains	1060
53	Fredonia	oolite grains	1080
54	Fredonia	oolite grains	1100
55	Fredonia	oolite grains	1120
56	Fredonia	oolite grains	1140
57	Fredonia	oolite grains	1160
58	Fredonia	oolite grains	1180
59	Fredonia	oolite grains	1200
60	Fredonia	oolite grains	1220
61	Fredonia	oolite grains	1240
62	Fredonia	oolite grains	1260
63	Fredonia	oolite grains	1280
64	Fredonia	oolite grains	1300
65	Fredonia	oolite grains	1320
66	Fredonia	oolite grains	1340
67	Fredonia	oolite grains	1360
68	Fredonia	oolite grains	1380
69	Fredonia	oolite grains	1400
70	Fredonia	oolite grains	1420
71	Fredonia	oolite grains	1440
72	Fredonia	oolite grains	1460
73	Fredonia	oolite grains	1480
74	Fredonia	oolite grains	1500
75	Fredonia	oolite grains	1520
76	Fredonia	oolite grains	1540
77	Fredonia	oolite grains	1560
78	Fredonia	oolite grains	1580
79	Fredonia	oolite grains	1600
80	Fredonia	oolite grains	1620
81	Fredonia	oolite grains	1640
82	Fredonia	oolite grains	1660
83	Fredonia	oolite grains	1680
84	Fredonia	oolite grains	1700
85	Fredonia	oolite grains	1720
86	Fredonia	oolite grains	1740
87	Fredonia	oolite grains	1760
88	Fredonia	oolite grains	1780
89	Fredonia	oolite grains	1800
90	Fredonia	oolite grains	1820
91	Fredonia	oolite grains	1840
92	Fredonia	oolite grains	1860
93	Fredonia	oolite grains	1880
94	Fredonia	oolite grains	1900
95	Fredonia	oolite grains	1920
96	Fredonia	oolite grains	1940
97	Fredonia	oolite grains	1960
98	Fredonia	oolite grains	1980
99	Fredonia	oolite grains	2000
100	Fredonia	oolite grains	2020

limestone powder 67.

Continued from above

39	Strongly mottled light grey fine gr. l.	656
40	medium gr. light grey l.	662
41	fine gr. dark grey l.	668
42	fine gr. grey l.	680
43	light grey fine gr. l.	686
44	medium gr. light gr. l.	692
45	medium gr. grey l.	712
46	rather coarse gr. grey l.	735
47	medium gr. dark grey l.	755
48	fine gr. dark grey l.	780
49	fine gr. dark grey l. with some light grey medium gr.	786
50	fine gr. dark grey l.	794
51	medium gr. light gr. l. + dark grey fine gr. l.	807
52	fine + medium gr. dark grey l.	813
53	fine grained dark grey l.	845
54	rather coarse grained light grey or whitish l.	866
55	fine gr. dark grey l. with a little chert.	890
56	coarse grained light, whitish l. with iron ore bands.	901
57	coarse gr. whitish l.	960
58	Rather coarse gr. crim. l.	1050
59	Rather coarse gr. l.	1030
60	Rather coarse gr. l. - shaly cleavage.	1040

8 + 20 in's

61	Medium gr. light gr. l.	1050
62	Medium gr. light gr. l.	1080
63	Medium gr. light gray l.	1100
64	(fine gr. l. very fine fragments full of minute bryozoan fossils.)	1100
65	very fine grained dark argill. rock.	1100
66	fine grained argill. rock.	1130
67	fine gr. dark grey argill.	1150
68	fine gr. dark grey argill. rock.	1150
69	fine gr. dark gray argill. rock.	1150
70	Black shale (Dumfriesshire)	1150
71	fine gr. dark gr. argill. rock.	1150
72	fine gr. dark grey argill. rock.	1150
73	Black slate	1234

100 + 874 = 974

Black slate 85

74	Black slate	1010
75	Black slate	1010
76	Black slate	1010
77	Black slate	1010
78	Black slate	1010
79	Black slate	1010
80	Black slate	1010
81	Black slate	1010
82	Black slate	1010

Bed E. 50 ft. Sandstone. (water worn Terlingford)

11 ft soft clay shale. Bluish.

4 ft more massive fine grained l.

14 ft limestone flags, interbedded with clay.

Bed F. 22 ft. bluish gray l. fossiliferous

10 ft mostly square clay shale

5 ft clay shale

13 ft greenish clay

10 ft reddish clay

7 ft greenish soft clay + arg. shale

5 ft shaly and thin bedded ss.

3 ft thin bedded shaly ss.

1 ft more massive ss.

1 ft shaly ss.

8 in more massive ss.

1 ft shaly ss.

4 in more massive ss.

5 in shaly brown ss.

3 ft soft clay shale

16 1/2 ft limestone, oolitic, fossiliferous

32 ft shaly ss + a few hard ss. layers

11 ft soft clay shale

2 1/2 ft soft clay shale

8 ft fairly hard ss. a few thin bedded ss.

18 1/2 ft soft blue clay shale

22 ft not exposed.

27 1/2 ft not exposed. to bridge road.

25 ft Garfield B. top not seen.

11 ft Holly B. base not seen.

Tertiary gravels at 860-870
at 11.30 AM.

Thursday, Aug 27, 1909

ss. layers partly exposed
Clay shale soft, bluish, thin
limestone thin
10 in ss. not well exposed.

Bed E

Loc. 74.

Section down gully South of
road, 300 yds west of Proctor Roberts.
two miles east of Hopkinton.

7 ft thin bedded shaly ss.

11 ft clay shale

2 ft argillaceous marl ss.

12 ft clay shale at top, lower half covered

4 ft l. at road level at top of gully

Soft arg. shale above.

13 ft sandy shale, becoming

5 ft covered.

16 ft cherty ss.

interbedded.

22 ft clay shale with fossils in the fossiliferous thin l. at considerable

4 ft l. Unconformable.

Bed C, how probably? Not
actually seen or as to be certain

Loc.

75.

840 at 11 am

Chapman - passed by the bridge

John E. at bridge, Chapman

Charles John Brown, lumber

Haverhill - at 11 am.

George William Merchant

Judge W. W. Cabot

Frank London.

Hotel, 615 at 1.00 PM.

Chapman, 11

100.176

22 ft massive ss.

16 1/2 ft soft clay shale

3 ft limestone

12 ft (shaly ss. in part) heavily crinoid

3 1/2 ft l. mostly weathered away
containing large l. fossils
10 ft continuous l. top of

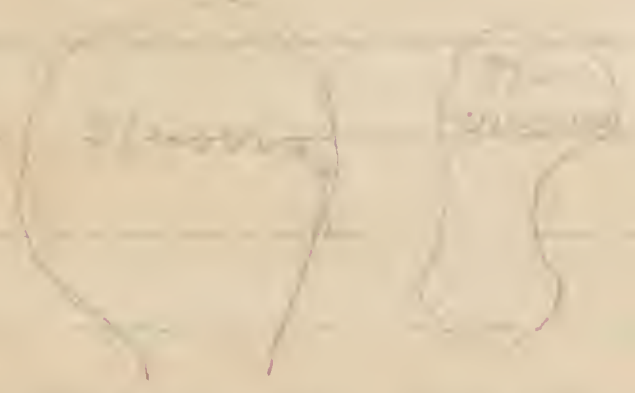
16 ft clay shale 2 samples 1887, 1898.

2 1/2 massive ss. - massive ss. large l. up the river some miles.

Shale layer

12 ft clay shale & thin bedded ss. abundant

18 ft fossiliferous



Bed B

26 ft limestone - top bed

2 ft clay shale

Sample 1888
1891
1896
1897

Upstream 180 ft 1893 left at B.A.M.

640 ft at B.A.M. - 1st point along road (top of Strophomena part)

665 765 ft - Top of Bed C or T. in river
out of Strophomena part at 8.15 AM

750 ft - plenty of gravel at river

White water to river. Crinoid 5 ft of l.

730 ft - top of l. at river level at section No. 74. at 8.30 AM.

745 ft at 8.45 AM at Loc. 75.

750 limestone, a short distance N.E. of Locality 75

765 ft where road continues straight and another road turns southward.

Loc 77 - 770 ft. at 8.50 AM.

The l. NE of Loc. 75 must have been very thin. Thin bedded ss. show up immediately above, and continue to Loc. 78.

Loc. 78. Considerable thin bedded ss. shown l. (same as at 75?) 765 ft. shaly ss. base at 755 ft. soft clay shale base at 740 ft. On the N side of the valley the upper ss. & the fine bedded ss. is reached again.

At 770, above the surface is apparently covered.

The l. must have been there

Loc. 79 - at 775 ft.

Ch. shale - 790 ft. in center of section

60) 0.5 ft chiefly clay shale
10 ft shaly ss.
28 ft clay shale.

25 ft top of l. = 3 ft ^{very fine, light} 8 in sized ss.

5 ft soft clay shale

2 ft l.

5 ft clay shale

Considerable shaly ss.

at 7.45 AM

Loc. 80. and cross at 770

Ch. shale - 790 ft. in center of section
5 ft ^{thin bedded} ss. - 10 ft. ^{very fine, light} 8 in sized ss.
5 ft ^{very fine, light} 8 in sized ss.

Loc 81

This does not look like
Ordovician l. m. s. but if the
rock is fine grained and prac-
tically, impure, and with
a little medium crystalline +
cryst. l. near top.

section.

up to locality 80.

ss. + sandy shale and clay shale

685 top of Ordovician? l. = 19 ft.

on below 10-15 ft. with fossils
exposed.

At top of hill on other side of
creek the top of section is formed
by massive ss.

Limestone with calcite, 680 at
10,45. This may correspond
to the Ordovician at
Shirley church.

Loc
82

Further west of the section
l. thick section, but with
impure, calcite + ss. at
690 ft.

2.35 J.M.

Bound for oil on V. G.

Thursday July 29,
Loc. 88. 665 ft at 5.30 P.M.

Corundum 52 ft at 6.10 P.M.

On John Hardin's land, in the
Little Pond West of Wolf Creek.
About time the Brandenburg
lode was on, Found salt
water under the lode zone.

2 mi E of station on top of Hill Grove
they are boring a well at present.
See map. The parties doing
the work at Ekron. From the
Co. doing the work. Go to
Ekron to find out.

Presently they have pumped
out the old well 2 mi NW of
Ekron. on Church, in the Trout
place. 1 mi SW of Weldon a
Brandenburg at Ekron.

Corundum 440 ft - 7.30 A.M.

Loc 90 - 640 top of l. = upper section
has been in use for quite a distance
and the lode.

Loc 91 - 665 ft at 9.20 A.M. ^{10.15} ^{10.15}

Loc 92 See later

Loc 93 - 455 ft. bridge at Wolf
Creek at 10.15 A.M.

across the creek; at 470 ft

glacier at present are of quartz,

glacier at present are of quartz,
down given by the lode.

Loc. 94 - 490 ft - at 10.35 A.M.

over the lode

500 ft - base of Brandenburg.

Rock lode - 3 ft.

Loc 95. 750 = top of hill.

Loess.

730 ft = Terrestrial pebbles at 11.30 AM
above.

144 ft shaly with shelled ss below, becoming
softer above.

5 ft fine grained yellow ss from 2.

7 ft coarse gr. sandstone.

5 ft 2 in of fine grained yellow ss from 2.

to with thin lignification some

5 ft 4 in clay shale.

5 ft 7 in shaly thin bedded ss shale.

11 ft 2 in clay shale

from 2 in above with

public amount of yellow ss

3 in 1 in of brown ss

37 ft clay shale

16 ft 4 in lignified ss

covered with at top

572 ft

section essentially covered

40 ft 7 in thin shaly ss. at various levels

13 ft 2 in ss

22 ft poorly exposed clay shale at top

49 ft 2 in of ss. fine grained

45 ft 2 in base of section

Loc 96 — 140 ft Terrestrial pebbles

Loc 97 760 ft at 12.15 = top of upper
Triassic.

598 ft = top of lower Triassic
limestone

thin bedded sandy shale

670 ft = base

chiefly clay shale above,

650 = top of Holly ls

640 = base of Holly ls.

Big cherty ss,

630 = top of limestone

618 (middle of section) at top of ss.

top is not representative

exposed

610 Top of Chancel.

limestone with some inter

bedded ss. & sandstone

575 strongly bedded ss

limestone

530 ft a sandy limestone

base of section = 500 ft base of ss. & ss.

465 ft below cherty ss

430 ft ss. & ss. & ss.

400 ft ss. & ss. & ss.

370 ft ss. & ss. & ss.

340 ft ss. & ss. & ss.

310 ft ss. & ss. & ss.

280 ft ss. & ss. & ss.

250 ft ss. & ss. & ss.

Loc 78.

2 ft l. = top of B. and T. horizon
 5 ft sand
 1 ft l.
 3 1/2 ft shale
 10 ft 2
 6 ft 2
 10 ft l.

18 ft B. of Clay ss. at level for 15 ft.

Loc 77

base of lower Clinton ss.

5 ft 2 bedded shale
 22 ft clay shale
 2 ft limestone
 15 ft clay shale
 1 ft l.
 17 ft 2 bedded shale
 1 ft l.
 4 ft 2 bedded shale
 7 1/2 ft l.
 4 ft l. but may be an irregular
 11 ft B. of Clay ss.
 top of Beacon

Loc. 75 = top of upper Clinton l.
 = 715 ft at 4.20 PM,

Top of lower Clinton ss. at 4.25 PM

Top of Volley l. = 635

Top of Beacon l. = 510 ft

Beacon ss. 510 ft at 4.50 PM

George F. Larnery,



665
 560
 105

Black shale

1234
 100
 1135

Loc. 92

at 6.10 P.M.

742 top of hill

742 top of hill, ss.

742 top of upper Fairbank

742 limestone

742 bit. ls. rock

742 sandy shale - clay

742 chiefly clay shale

695 } chiefly massive ss.

695 } ls. & clay shale in irregular

695 } clay shale

695 } shale ss.

695 } clay shale

642 } limestone

642 } clay shale & limestone

625 } fine ss. exposure on shore

595 - ft. spring level

= = = = =

Loc. 93

Concordia, local level

545 ft. at 7 A.M.

River about 40 ft. lower

Barrel level of Concordia River

545 ft.

Loc. 89

740 top of hill

740 clay, limestone

740 near where road intersects ls.

740 at top of upper Fairbank

740 road, changing to clay ss.

672 top of ls.

672 limestone & shale

675 top of clay ss. + ls. of ls.

675 limestone

625 top of limestone

622 fine limestone

620 clay shale

620 } massive ss. & ls.

along road top of ls. with clay shale

585 - ft. spring level

Loc. 86 - 710 at 7:55 AM.

Loc. 87 - 775 - 8:05 AM. Top
of l. fragment with black
l. in situ below. This is
supposed to be the top of the
upper l. fragment.

Loc. 88 - 710 at 8:30 AM.
Loc 78 - 710 top of l. age uncertain.

872 at 9 AM. l. fragment.

Loc 99. 950 top of l. so.
considerable clay shale
890 top of l. fragment.
so - 950 top of l.
clay shale.

890 - top of yellowish brown
clay shale. l. fragment
which may be a fragment of
l. fragment. Top of l. fragment
is at 890.

890 - top of l. fragment. clay shale
890 - top of l. fragment.
changed to 890 over clay shale
the section.

890 - l. fragment. clay shale
890 - l. fragment. clay shale.

838 top of clay shale
chiefly covered.

705 top of l. - 2 ft. fragment
covered.

715 - top of l. - 7:45 AM.

745 - top of l. fragment at 11:30 AM.

720 - top of l. fragment.

706 - top of l. fragment.

700 - clay shale.

Massive ss.

660 ft top of l. fragment.

632 ft - base of l.

610 - base of l. fragment.

590 - base of l. fragment.

570 - base of l. fragment.

550 - base of l. fragment.

530 - base of l. fragment.

510 - base of l. fragment.

490 - base of l. fragment.

470 - base of l. fragment.

450 - base of l. fragment.

Line between R.C. Clark &
 Monticello about 5 yds off
 surface of V.L. Boulder
 about 1150 ft. above
 nothing.

Site 102

635 ft at 12.25 P.M. at Mac H.

Frederick

Yellowish limestone	gold	1.20
	silver	.80
	value	1.00

Yellowish l.	gold	.04
	silver	.20
	value	1.28

Yellowish l.	gold	.04
reddish brown	silver	.20
reddish brown	value	1.32

Frederick	2.40 gold	.12
	silver	.80

Frederick	2.46 gold	1.36
	silver	.44

Golden Quarry Co. Denver Co.

Old head of Cheyenne River

Site 107

715 ft at 2.15 P.M.

Site 102 Cheyenne

625 ft Cedar River Landing
 Black River at 2.45 P.M.

735 ft of Cedar River at 3.00 P.M.
 head of Cedar River Landing
 the old river.

Collected 3 specimens of Monticola
 of 3 specimens of the same
 color as the found ones, the
 other 2 specimens were black.

Loc 103 — 735 ft. at 3.25 P.M.
Plenty of white volcanic rock.
No attempt to look up yet.

Other can not be found at this time.

Loc. 104 — 735 at 3.40 P.M. = top of
Lower Oolite. 2. 2. 2.
Large number of large blocks

Opposite base of H.
Shallow water

Loc 105 — 720-740 in a high way &
plenty of ss. just examined
with care. No fossils seen
except small, and large blocks
seen fallen down at 4.10 P.M.
This probably upper Garfield.
Below this is red clay shale.

Loc 106. Lower Carbonate cliffs.

Loc. 107 680 at 5.10 P.M.

Loc 108. 680 top of Holly 0 at
5.10 P.M.

690 Stephensport at
6 P.M.

F. Tarboe,
 Chemist. Ky.
 Patent No. 2276 of F. Tarboe
 Filed Aug. 22, 1905.
 Serial No. 389738.

St. Stephens - Hand making road

- | | | | |
|--------------------------------|-------|------|---------------|
| 1177 - 100 yds. of 1st St. 1st | 1.44 | 2.07 | both together |
| 1178 - 100 yds. of 1st St. 2nd | 1.11 | 2.07 | |
| 1179 - 100 yds. of 1st St. 3rd | 1.89 | 2.22 | 40 ft |
| 1180 - 100 yds. of 1st St. 4th | 3.41 | 3.08 | |
| 1181 - 100 yds. of 1st St. 5th | 24.83 | 1.28 | |
| 1182 - 100 yds. of 1st St. 6th | 3.85 | 3.5 | |

Lower Triassic limestone - 3.0 sample
 average 972. Co. C. 13.
 15 ft above RR level at St. Stephens
 no special pebbles, for 75. di. only the lower

Lower part,
 900 deep wells. gas bed

109. Wm Cedar Grove church, 1 mi S of
Walden. Old well 1888 about.
719 ft deep at the depth gas
rather poor flow.

Cleaned out about Dec 1, 1918.
At 860 found salt water
which rose 300 ft in hole.
In small quantity, so that
hole was easily kept dry by
bailing.

Top of Black Shale at 700

Bottom of " " at 943 ft.

At 973 ft salt water was
struck in large quantity,
which rose up to 150 ft from
top of well and the further
drilling was abandoned.

About 35 ft after beginning
the further drilling (755 ft) about
the first gritty shell was struck.

Found and about 100 ft
up to 400 ft from bottom.
Two more of these shells were
struck in going down the
black shale.

110 Jack & Henry Herrington, farm.
Old oil well, with 2 miles
of Walden.

Monday, July 26

6.10 AM	—	800
8.10		820
10.10		790
12.10 PM		820
2.10		840
4.10		860
6.10		860

Tuesday July 27

6.10		880
8.10		880
10.10		880
12.10 PM		880
2.10		900
4.10		920
6.10		920

Wednesday July 28

7.00		800
9.00		800
11.00		800
1.00 PM		800
3.00	—	820

Thursday July 29.

6.30		790
8.30		780
10.30		790
12.30		800
2.30		840
4.30		860
6.30		860

Friday July 30

6.10		880
8.10		880
10.10		900
12.10		920
2.10		960
4.10		1000
6.10		1020

Saturday July 31

9.30	—	10.20 ft
11.30	—	10.20
1.30	—	10.40
3.30	—	10.60
5.30	—	10.80

Monday Aug 2

112 West Point 557 ft at 7.30 AM

~~Went to the top of the mountain and~~

~~555 = top of Continental shelf. before~~

~~some 100 ft. higher than the shelf~~

~~surface: and a small ledge~~

~~between the two~~

~~the shelf is 100 ft. higher than~~

~~555 to 572 ft.~~

~~measured from 572 ft.~~

~~to the top of the shelf of a small~~

~~mountain. (Bed 6)~~

~~Went to the top of the mountain and~~

Monday Aug 2

1125 W. of 55th St at 7.30 AM

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

5 ft clay shale with fossils at
base called Bed A2

1 ft limestone

W. of 55th St at 7.30 AM

~~W. of 55th St at 7.30 AM~~

~~W. of 55th St at 7.30 AM~~

Monday Aug 2

120 West of 557 ft at 7.30 PM

~~557 ft~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

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~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

~~594 = top of continuous bed of~~

Monday Aug 2

[illegible]

~~W. H. H. H. H.~~

295 - 100 y. *Limnoria* *mal.* *cap.*
296 - *Limnoria* *mal.* *cap.*

Experiment 7

28. *Chrysomelidae* (the same as 27)

622/10

2nd 1000 ft. to 1000 622 ft

Sept. 11. 1881. P. 10.

1875

55 - The
with

2. Middletonville. at 3.30 P.M.

222

✓✓✓✓

12345678910111213141516171819202122232425262728293031323334353637383940414243444546474849505152535455565758596061626364656667686970717273747576777879808182838485868788899091929394959697989910010110210310410510610710810911011111211311411511611711811912012112212312412512612712812913013113213313413513613713813914014114214314414514614714814915015115215315415515615715815916016116216316416516616716816917017117217317417517617717817918018118218318418518618718818919019119219319419519619719819920020120220320420520620720820921021121221321421521621721821922022122222322422522622722822923023123223323423523623723823924024124224324424524624724824925025125225325425525625725825926026126226326426526626726826927027127227327427527627727827928028128228328428528628728828929029129229329429529629729829930030130230330430530630730830931031131231331431531631731831932032132232332432532632732832933033133233333433533633733833934034134234334434534634734834935035135235335435535635735835936036136236336436536636736836937037137237337437537637737837938038138238338438538638738838939039139239339439539639739839940040140240340440540640740840941041141241341441541641741841942042142242342442542642742842943043143243343443543643743843944044144244344444544644744844945045145245345445545645745845946046146246346446546646746846947047147247347447547647747847948048148248348448548648748848949049149249349449549649749849950050150250350450550650750850951051151251351451551651751851952052152252352452552652752852953053153253353453553653753853954054154254354454554654754854955055155255355455555655755855956056156256356456556656756856957057157257357457557657757857958058158258358458558658758858959059159259359459559659759859960060160260360460560660760860961061161261361461561661761861962062162262362462562662762862963063163263363463563663763863964064164264364464564664764864965065165265365465565665765865966066166266366466566666766866967067167267367467567667767867968068168268368468568668768868969069169269369469569669769869970070170270370470570670770870971071171271371471571671771871972072172272372472572672772872973073173273373473573673773873974074174274374474574674774874975075175275375475575675775875976076176276376476576676776876977077177277377477577677777877978078178278378478578678778878979079179279379479579679779879980080180280380480580680780880981081181281381481581681781881982082182282382482582682782882983083183283383483583683783883984084184284384484584684784884985085185285385485585685785885986086186286386486586686786886987087187287387487587687787887988088188288388488588688788888989089189289389489589689789889990090190290390490590690790890991091191291391491591691791891992092192292392492592692792892993093193293393493593693793893994094194294394494594694794894995095195295395495595695795895996096196296396496596696796896997097197297397497597697797897998098198298398498598698798898999099199299399499599699799899910001001100210031004100510061007100810091010101110121013101410151016101710181019102010211022102310241025102610271028102910301031103210331034103510361037103810391040104110421043104410451046104710481049105010511052105310541055105610571058105910601061106210631064106510661067106810691070107110721073107410751076107710781079108010811082108310841085108610871088108910901091109210931094109510961097109810991100110111021103110411051106110711081109111011111112111311141115111611171118111911201121112211231124112511261127112811291130113111321133113411351136113711381139114011411142114311441145114611471148114911501151115211531154115511561157115811591160116111621163116411651166116711681169117011711172117311741175117611771178117911801181118211831184118511861187118811891190119111921193119411951196119711981199120012011202120312041205120612071208120912101211121212131214121512161217121812191220122112221223122412251226122712281229123012311232123312341235123612371238123912401241124212431244124512461247124812491250125112521253125412551256125712581259126012611262126312641265126612671268126912701271127212731274127512761277127812791280128112821283128412851286128712881289129012911292129312941295129612971298129913001

A close-up photograph of the fore-edge of a book, showing the thickness of the pages and the binding structure. The pages appear aged and slightly discolored. The binding is visible on the right side, showing a dark, possibly leather or cloth, cover. The overall appearance is that of an old, well-used volume.

Aug 4 Wednesday
700 ft above at 7 AM

Loc 122 - 710 ft at same

Loc 123 - 725 ft at same

770 ft Top of 5th Fossil with
Fossiliferous material at 745 ft.

650 ft at same level to same
leading to old gas well.

775 ft - along lane to well. - white
limestone. Not visible.

795 ft strongly calcareous limestone
to 860 ft strongly calcareous.

Loc 124 712 ft = level of gas well
at 8.30 AM

Loc 125 of middle of lane, at 725, there
is Fossiliferous calcareous l. in place at
8.40 AM

Loc 126 - 725 ft at 9.05 AM

Loc 127 - 570 ft at 9.15 AM. Coldest
Fossiliferous. From horizon to

Loc 128 - 775 ft at 9.30 AM Coldest
Fossiliferous. Where the fossiliferous
stone along the road to same.

Loc 129 - 680 ft. Lowest Fossiliferous seen
since I started down the road.
but it may be covered (covered)
at 7.37 AM.

Highest Fossiliferous seen here is
at 750 ft where is the top of the
hill where exposed by the road.

Loc 130 685 Fossil - - - 7.10.15 AM

Loc 131 692. Fossiliferous calcareous l. top
with small thin, moderately calcareous
limestone at 685 ft.
Front of Hill 6.10.15 AM
10.30 AM

760 - 2nd Fossiliferous. 7.10.15 AM

780 - Coldest Fossiliferous. 7.10.15 AM

The top of the hill is covered by the road.

Loc 132

850 Col. the limestone at 10.50 AM.

Loc 133 - 710 at 11 AM.

Loc 134 - 722 at 11.20 AM.

Loc 135 - 770 at 11.40 AM. at base of K. A. Hamilton.

190 at 12.40 PM. same place

950 Fredonia - 920 up to

920 - 940

940 Fredonia - 950

Loc 136 950 - 120

120 - 540

540 - 790

790 - 782

782 - 785

Loc 137/785 - 785

Loc 138/790 - 790

at 2.15 PM. Col. the l.

Loc 139 - 815 at 2.20 PM.

West of G. L. L. L.

at 2.20 PM. Col. the l.

Loc 140 - 815 at 2.35 PM.

Loc 141 - 770 to 815

at 3.00 PM.

at 3.00 PM. Col. the l.

Loc 142 - 870 - 870

at 3.10 PM. Col. the l.

at 3.10 PM. Col. the l.

at 3.10 PM. Col. the l.

at 3.10 PM. Col. the l.

Loc 143 - 850

at 3.30 PM. Highest part of road.

at 3.30 PM. Highest part of road.

Loc 144 - 760 ft at 3.35 PM.

Loc 145 - 770 ft at 4.00 PM.

at 4.00 PM.

Loc 146 - 740 ft at 4.02 PM.

760 Fredonia chert.

Loc 147/760 St. Louis chert at 4.10 PM.

at 4.10 PM.

Loc 148 - 730 - St. Louis chert at 4.20 PM.

Loc 149 - 720 - St. Louis chert at 4.30 PM.

Loc 150 - 730 - St. Louis chert at 4.40 PM.

Loc 151 - 750 St. Louis chert at 4.50 PM.

730 at 4.50 PM.

720 before Thursday Aug 5
at 7 AM.

912 114 ft at 720

Loc 153 - 720 St Louis chart

Loc 154 - 718 - at 730 AM.

Loc 155 - 725 St Louis chart

Loc 156 - 718 - at 740 AM St Louis chart

Loc 157 - 750 - at 750 AM St Louis chart

765 - at 750 AM St Louis chart

Loc 158 - 740 - at 8 AM.

Loc 159 - 720 - St Louis chart,

Loc 160 - 710 St Louis chart

Loc 161 - 690 at 8.25 AM,

780 St Louis chart,

Loc 162 - 715 St Louis chart

695 St Louis chart.

112. 114 ft at 720.

Out down in the 800 ft. at 700 ft.
enough to furnish the house.

Set a little oil, 3 or 4 inches
collected on top of water. Depth
700 + feet. Went into the Black
Slate. Got a good sulphur
well at the house.

Sulphur well on Newington Place
at 600 ft at 9.10 AM.

Oil + gas well at same level
in same field.

Oil collected in the water.

Loc 162 - St Louis C + chart

163 - 720 - at 9.45 St Louis P.

164 - 720 - St Louis chart at 10.00 AM.

109 - J. N. D. well, 68.5 ft at
10 AM.

R R crossing at 180 ft

165 Well over 660 ft at 10.40 AM.

Barnyard by 5 ft

Wells 36 + 37 against 1 foot well
within 10 ft of the level.

Loc 166 - 685 ft St Germ. Handl. 12.45
665 ft St. Germ. Handl. abundant
at 6pm.

Loc 167 - 630 ft. St Germ. at 11 AM.
545 ft. Handl. at Bremen -
dorming at 12.50 PM,

495 ft Landing at river edge at
Bremdenburg.

Loc 168 - 520 ft Well 7 probably
Well seen but somewhat out
of view.

No 7 Well Bored in 1863 got
plenty of gas.

Charles C. Cooper, Superintendent
of the Heating Co. at the West
Point or at Long Branch.
Maid at Bremenburg.

Well 8 - Depth

Well 9 - Depth

Well 10 - Depth

5 days ago at Bremenburg
brought up barrels to 25 lbs. each
and sold at 45 + 50 etc a barrel.

Loc 169 - 710 ft at 3 PM. The upper
lithographic quarry.

J. M. H. in lower & upper
but no info. information. at
Bremenburg.

Loc 170 - 710 ft at 3.45 PM.

Loc 171 - 710 ft at 4.20 PM.

Loc 172 - 760 ft at 4.30 PM - St Germ.
abundant.

Loc 173 - 770 ft St Germ. abundant
at 4.50 PM.

Loc 174 - St Germ. about 765 ft at
5.00 PM.

780 ft at 5.30 PM.

Sunday Aug 6.
Start 730 ft at 7 am.

Lr 173 - 730 at 7.20 AM - 1st view
Chert.

Lr 174 770 1st Low chert.

Lr 175 665 Hard L. probably litho-
graphic part of St. Louis
formation. Shale, redish.

Lr 176 - 690 at 8.15 AM.

Lr 177 - 690 St. Louis L + chert.

Lr 178 - 705 at 8.30 AM.

Lr 179 - 675 Colitic Fred zone in
place at 8.45 AM.

Lr 180 - 650 Colitic Fred zone block
either at base of Fred zone or
dropped in top of St. Louis L.

Lr 181 - 675. Top of micaceous. Covered
by a somewhat magnesian concrete
by typical white - place 10 ft up.
The rock is compressed like biological
material. even above the Colitic Fred zone.
720 - top of hill at 8.50 AM.

Lr 182 - 730 Top of micaceous concrete
by micaceous. Further on is
Big Cherty in place.

775 base of Lower Triassic L.
Lower Triassic = 11 ft at
least. Covered by Triassic
material with a few fossils.

Lr 61 - 830 ft at 10 AM.

Lr 60 - 835 ft

Lr 183 655 ft Apparently top of
Lower Triassic, at least 11 ft
of L. exposed with large Pentamer
ites. A part is strongly white
like the lower Triassic L.
which contains plenty of
large Pentamerites of the same
type as St. Louis fossils. It
seems to be covered with
ss. Found one trace of a
higher L. in some places.
at 10.45 AM.

in garden of a small creek.
650 ft. limestone boulders, some of
them white, some dark rock.
- Lower T. in line?

Loc 184.

On shore of small lake. The
Tar Springs are massive 720 ft.
ss. debris.
- 2-4 ft. sand.
1 ft 4 in. (small) Middle T. in line near.
1 ft. sand.
11 ft. considerable l. fossils few. Some
of it white, top at 650 ft. at 11 AM.

Loc 185

Massive ss.

Top fl. at 775 ft. at 11.30 AM.
5 ft. limestone.
Tar Springs, 20.

Loc 186 - 790 ft. - at 11.40 AM.

Loc 187 - 790 ft. - at 11.45 AM.

Loc 188 - 795 ft. at 1.40 PM. No
limestone since Loc. 185.

Loc 189 - 795 ft. - 200 ft. ss.

Top of limestone 3 ft. thick
Bottom of valley at 695 ft.
This is same l. as at 185.

Loc 190

770 top of limestone with top
752 base of limestone. (Thin)
Clay shale below

725 base of clay shale and
top of sandstone layers

705 base of sandstone and
top of clay shale.

Clay shale down to 695.

Loc 191

704 ft. limestone at 3.15 PM.

682 top of limestone

655 base of sand.
Limestone 4 ft. Bed A.
Pentamerus & other fossils in
Clay shale down to 642 ft.

642 Limestone top white abundant.

634 base of l.
Marl with fossils Bed B
Pentamerus & other fossils in
Clay shale

615 top of limestone. 100 ft. ss.

9 ft limestone base
4 ft 5 in. clay shale
3 ft sandstone from base?
11 ft white sandstone
base not seen

Loc 62-840 ft at 4 PM

Loc 64- 780 ft at 4.50 PM

Base of fossiliferous marble
see limestone

Bellevue is a long way

Then limestone at 720.

This is white sandstone

Over this sandstone is

Rosendale ss. 3 ft

Then limestone 11 ft perhaps
see former notes

Lowest sandstone exposed at 665
ft. but not base of this formation

Top of loc 740 ft at 5.45 PM

Overlain by clay shale

ss section with l. at 7.90

This l. is only 3-4 ft thick

as far as can be determined
from the present exposure

underlain by considerable
marl

Loc 194

Top of loc 730 ft. about 5 ft
exposed

Sand and clay from exposure

710 top of limestone - 5 ft?

underlain by white sandstone
at 695 ft

545 ft Belvedere way
at 7.40 PM

Saturday, Aug. 7.

470 at 6.00 AM on Boarder
455 at 7.00 AM

Loc 188 - 630 ft at 7.40 AM. Top of
bed with chert. The upper part
of this chert is the rough, crinoid
indicating Fredonia.

St. Louis top probably at 600 ft.
Syringopora found here and at
other points near the border. It
is under the St. Louis & Fredonia.

Loc 195 - 600 ft at 8.15 AM, Fredonia
ortho l. in place.

Loc 196 At wells quarry
Sandstone and as dropped blocks.
715 ft. rolling bottom. Top of bed at 700
strongly ortho l. at 700 ft. at 7 AM.

680 strongly ortho l.

Sandy l. layer

675 - Fredonia ortho l.

ortho l. at 585 ft. top of Fredonia
580 ft. Fredonia the massive l.

Loc 191 - 550 ft. at 10.25 AM.

Loc 197 - 510 ft at 11.00 AM.

Loc 198 - 545 ft.

top = 595 strongly ortho l.

Syringopora above

l. again at 610 ft.

Loc. 199.

Further west

622 ft. top of 10 ft. Fredonia
covered by clay mat + shaly ss.
section.

ortho l. at 660 ft.

Then red and by more sand
up to 678 ft.

678 to 684 ft. l. Bed B.

covered by ss. 6 ft.

fine brownish clay shale 4 ft.

ortho l. clearly ss.

Loc. 200 - 715 at 12 PM. Ball's Bluff
Mar. Thompson.

735 at 1.30 PM. Same
place.

Loc. 200 - 685 ft. at 1:40 PM.

Loc 201 - 715 ft at 2:20 PM.

base of Knox is present.

610 = top of sandstone ledge

135 ft = top of heavy rock

slightly white

Loc 71 - 618 ft at 4:20 PM.

Loc 202 - 705 ft limestone, 4 ft
by Juncos. Atmills quarry area,
at 4:30 PM.

Limestone is gone at 650
at least 4 ft thick

Loc 203 Atmills quarry, again,
570 ft apparently top of
Juncos's solid limestone.
at 5 PM.

Loc. 179 - 635 ft at 5:10 PM.

East of L 85, east of Haverhill,
about 200 yds is a large refuse
heap from some coal mine,
from above the basal coal
measurements.

Struck oil E of town at 1230, at 1st
well, went down this level, about
#3750 / 1500 ft, looking out for oil but
no gas. ^{in 1889} Then fell up well to
1230 ft & shot it, and then
pumped the oil, in 1895. The well
furnished 200 bbl of oil for domestic
usage purposes. 50-100 bbls all sold off.
The second well began in 1893, they
went down 900 ft, and then quit.
The third well was begun in 1904, got
down 300 or 400 ft, drill got stuck
& quit.

First well was bored 1889, oil was found
off, some gas was noted, tank used,
on sandy beds 30-40 ft up.

The second well went down to oil
2000 ft at 1300, and quit, about
150 ft west of 1st.
Third well was let near the town.

Monday Aug 2

7⁰⁰ - 880
9⁰⁰ - 880
11⁰⁰ - 860
1⁰⁰ - 860
3⁰⁰ - 880
5⁰⁰ - 880

Tuesday Aug 3

7 - 7.80
9 800
11 800
1 800
3 880 = 7.80 ?
5 880 = 7.80 ?

Wednesday Aug 4

7.30 840
9.30 840
11.30 860
1.30 880
3.30 900
5.30 920

Thursday Aug 5

7 - 900
9 - 900
11 - 900
1 - 940
3 - 980
5 - 1000

Friday Aug 6

7 - 920
9 - 920
11 - 920
1 - 940
3 - 960
5 - 980

Saturday Aug 7

7.30 - 860
9.30 - 860
11.30 - 860
1.30 - 880
3.30 - 880
5.30 - 900

372 at Seng Norman coal
mine. at point 40 feet above
coal, = 382 ft for top of coal.
 $\frac{3}{4}$ mi. S of Hannesville

380 ft to top of shale, About 15 for
shale would place top of coal at
365 ft. at south edge of town.

Semi-cannel coal mine.

335 ft = 422 U. S. G. S. bench
mark at court house.

$$\begin{array}{r} 422 \\ 335 \\ \hline 87 \text{ add.} \end{array} \quad \begin{array}{r} 332 \\ 87 \\ \hline 419 - 420 \end{array}$$

Actual level of Seng Norman coal
is 420 feet,, 3 ft. vein.

315 = R R level at station.

